

SEMICONDUCTOR PROCESS FOR DISPOSABLE SIDEWALL SPACERS AND STRUCTURE

Abstract of the Disclosure

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A semiconductor process and structure (32) uses a disposable sidewall spacer (42) associated with lightly doped drain (LDD) transistors. The disposable sidewall spacers are efficiently removed by a gaseous fluorine ambient. Either molecular or atomic fluorine gas is used to remove a silicon germanium sidewall spacer with high selectivity to exposed insulating layers. This etch process is also isotropic. An additional benefit of using a gaseous fluorine ambient is incorporation of fluorine in isolation regions (48) surrounding the transistors, thereby reducing the dielectric constant. Improved insulating properties of the isolations regions can allow increased integration.